TRANSACTIONS

OF THE

ILLINOIS STATE ACADEMY OF SCIENCE

VOLUME 24 MARCH, 1932 NUMBER 3

Announcement
Twenty-fifth Annual Meeting

General Program, Section Meetings, Junior Section
Proposed Amendments to the Constitution
Instructions to Authors
General Information

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Friday and Saturday, May 6-7, 1932
University of Chicago, Chicago

Department of Registration and Education
State Museum Division, Centennial Building
Springfield, Illinois

Entered as second-class matter December 6, 1930, at the post office at Springfield, Illinois, under the Act of August 24, 1912.

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GENERAL PROGRAM

(All Addresses and Section Meetings Are Open to the Public)

THURSDAY, MAY 5

7:30 p.m. Meeting of the Council (*Room 209 Eckhart Hall*).

FRIDAY, MAY 6

8:00 a.m. Registration by all members and guests, and securing of final program and tickets for the annual Banquet of the Academy (*Mandel Hall*).

8:00 a.m. Meeting of the Council with local committee and delegates from affiliated societies (*Room 209 Eckhart Hall*).

9:00 a.m. Preliminary business meeting of the Academy. Election of new members; appointment of Committees on Nominations of Officers, on Resolutions, and on Auditing. Adjournment until 11:30 a.m. (*Mandel Hall*).

9:30 a.m. Opening of the twenty-fifth annual meeting and general session (*Mandel Hall*).

Address of Welcome—ROBERT MAYNARD HUTCHINS, President University of Chicago.

Response—FAY-COOPER COLE, President, Illinois State Academy of Science.

Address—*Twenty-five Years of the Academy of Science*—M. M. LEIGHTON, State Geological Survey.

Address—*Glacial History of the Chicago Area.*—J. HARLEN BRETZ, University of Chicago.

Address—*The National Forest Movement in Illinois.*—L. E. SAWYER, Extension Forester, Illinois State Natural History Survey, Urbana.

11:30 a.m. Annual Business Meeting of the Academy. Reports of officers and committees; other business. Adjournment until 5:00 p.m.

12:00–1:30 p.m. Luncheon (*Hutchinson Commons*).

1:45 p.m. Section meetings. Election of sectional chairman for 1931-32 by members of each section. Papers; demonstrations; discussions. Meeting place specified under each section in following pages.

5:00 p.m. Final Business Meeting of the Academy (*Room 133 Eckhart Hall*). Reports of committees; election of officers for 1932-33; appointments to standing committees; other business. Adjournment.

7:00 p.m. Annual dinner (informal), Crystal Ballroom, Shoreland Hotel. Reservations should be made in advance by personal application or mail (apply to A. C. NOÉ, University of Chicago), and tickets called for at Registration Desk at time of registration, May 6. $2.00 per plate.

7:45 p.m. Annual public lecture, Shoreland Hotel. Address of retiring President—*The Coming of Man*—FAY-COOPER COLE, University of Chicago.

SATURDAY, MAY 7

8:00 a.m. Meeting of the New Council (*Room 209 Eckhart Hall*).

9:00 a.m. Inspection trips. These will include visits to the New Oriental Museum, University of Chicago, the Field Museum of Natural History, the Adler Planetarium, and the Shedd Aquarium.

PROGRAM OF SECTION MEETINGS

FRIDAY, MAY 6—1:45 P. M.

UNIVERSITY OF CHICAGO

AGRICULTURE

Room 105, Anatomy Building

H. W. MUMFORD, University of Illinois, *Chairman*

Election of chairman for 1932-33.

Symposium: Recent changes in food habits and their causes.

1. Recent changes in food habits—SYBIL WOODRUFF and G. L. JORDAN, University of Illinois.

Changes caused by developments in:

2. Production—L. J. NORTON, University of Illinois.
3. Processing—F. M. SIMPSON, Commercial Research Dept., Swift & Company.
4. Distribution—E. L. RHOADES, The Food Trades Publishing Company.
5. Consumption—PAULENA NICKELL, University of Illinois.

ANTHROPOLOGY

Assembly Room, Social Science Building

A. R. KELLY, University of Illinois, *Chairman*

Election of chairman for 1932-33.

Symposium: Illinois Prehistory.

1. Field methods employed in Mississippi Valley archaeology, with special reference to the work in Illinois—FAY-COOPER COLE, University of Chicago.
2. Some observations on the antiquity of man in Illinois—M. M. LEIGHTON, State Geological Survey.
3. Local chronology and the regional distribution of morphological pottery characteristics—W. C. MCKERN, Milwaukee Public Museum, Milwaukee, Wisconsin.
4. Jo Daviess County—RICHARD SNODGRASS, University of Chicago.
5. Rock River Valley—W. H. GILBERT, University of Chicago.
6. Archaeology of the Chicago area—RICHARD MORGAN, University of Chicago.
7. Excavation in the Joliet-Kankakee Region—GEORGE LANGFORD, McKenna Process Company, Joliet, and FRED EGAAN, University of Chicago.
8. Fulton County—THORNE DEUEL, University of Chicago.
9. Quincy and Adams counties—JAMES GRIFFIN, University of Chicago.
10. Mound Excavations in Jersey County—PAUL F. TITTERINGTON, St. Louis, Missouri.
11. Some problems of recent Cahokia archaeology—A. R. KELLY, University of Illinois.
12. Southern Illinois as a focus for primitive peoples because of geographic factors—FLEMIN W. COX, Southern Illinois State Normal University, Carbondale.
13. Some alleged Siouian sites in southern Illinois—BRUCE MERWIN, Southern Illinois State Normal University, Carbondale.
14. A preliminary survey of the Wabash Valley—VERNE KINIETZ, University of Illinois.

BOTANY

Room 105, Botany Building

CHARLES A. SHULL, University of Chicago, *Chairman*

Election of chairman for 1932-33.

1. Recent studies of the morphology of plants from the Pennsylvanian of Illinois—A. C. NOÉ, University of Chicago (10 minutes, lantern).
2. Physiographic and horticultural ecology of the Beverley (Blue Island) Ridge—ELDRED GREEN (15 minutes).
3. The flora of some Illinois interglacial peat—JOHN VOSS, Manual Training High School, Peoria (10 minutes, lantern).
4. The development and differentiation of tissues in the stem tips of grasses—E. L. STOVER, Eastern Illinois State Teachers College, Charleston (8 minutes).
5. The Ascomycetes of the Chicago region—V. O. GRAHAM, Chicago (10 minutes).
6. Report of moss collections from Coles and Crawford counties—STELLA A. HOLMES and STELLA M. HAGUE, University of Illinois (10 minutes).
7. Preliminary pollen statistics for two Michigan bogs—PAUL K. HOUDEK, High School, Robinson, Illinois (10 minutes, lantern).
8. Some structural and metabolic effects of physiological predetermination—WILLIAM M. BAILEY, Southern Illinois State Normal University, Carbondale (10 minutes).
9. Some observations on the functions of corn tillers—D. O. CARTER and GEORGE H. DUNGAN, University of Illinois (12 minutes, lantern).
10. A contrast of plant habitats, with reference to H-ion concentration and plant distribution—JEROME ISENBARGER, Chicago (10 minutes, lantern).
11. The classification of conifers—J. T. BUCHHOLZ, University of Illinois.
12. Small fruit varieties for Illinois—A. S. COLBY, University of Illinois.
13. An evaluation of bud sports in the apple—M. J. DORSEY, University of Illinois.

ECONOMICS

Room N 11, Harper Memorial Library Building

ERNEST F. BOGART, University of Illinois, *Chairman*

Election of chairman for 1932-33.

Symposium: Taxation.

1. Cook County Finances—H. D. SIMPSON, Northwestern University.
2. Waste through the multiplicity of political units—S. D. LELAND, University of Chicago.
3. The State Tax Situation—DOUGLAS SUTHERLAND, Secretary, Civic Federation.
4. The State Income Tax in Illinois—M. H. HUNTER, University of Illinois.

GEOGRAPHY

Room 2, Rosenwald Hall

MABEL CROMPTON, State Normal University, Normal, *Chairman*

Election of chairman for 1932-33.

1. The extension of the wheat belt in Western Canada—F. C. BOHANNON, Galesburg High School, Galesburg.
2. Coffee plantation items in the Brazilian pattern of terrene occupancy—ROBERT S. PLATT, University of Chicago.
3. Bloomington: An urban community—EDNA M. GUEFFROY, Illinois State Normal University, Normal.
4. The agricultural pattern of east Lothian—G. DONALD HUDSON, University of Chicago.
5. The Osage Orange: A transitional geographic factor in central Illinois—ROBERT G. BUZZARD, Illinois State Normal University, Normal.
6. Address—CHARLES C. COLBY, University of Chicago.

GEOLOGY

Auditorium, Oriental Institute

T. E. SAVAGE, University of Illinois, *Chairman*

Election of chairman for 1932-33.

1. Some problems of engineering geology in the vicinity of Chicago — GEORGE E. EKBLAW, Illinois State Geological Survey (15 minutes, lantern).
2. Water supplies in Lake County, Illinois—W. D. GERBER, Engineer, State Water Survey (15 minutes).
3. The origin of the Great Lakes Basins—FRANCIS P. SHEPARD, University of Illinois (15 minutes).
4. The question of the Carlinville and Shoal Creek limestones—SIDNEY E. EKBLAW, State Geological Survey and State Water Survey (10 minutes).
5. Micro-fauna of the shale parting in the LaSalle limestone—H. L. GEIS, University of Illinois (10 minutes).
6. The depositional basin of the Springfield (No. 5) coal in northern Illinois—H. R. WANLESS, University of Illinois (10 minutes).
7. Loess deposits related to Wisconsin glaciation—MORRIS M. LEIGHTON, Illinois State Geological Survey (15 minutes).
8. The evolution and stratigraphic value of *Pterotocrinus* in the Chester series—A. H. SUTTON, University of Illinois (12 minutes).
9. Plant residues from No. 6 coal—ORRIN J. HENBEST, Illinois State Geological Survey (10 minutes).
10. The lithology of No. 6 coal—LOUIS C. MCCABE, Illinois State Geological Survey (10 minutes).
11. New research on Illinois coal balls—A. C. NOÉ, University of Chicago and Illinois State Geological Survey (10 minutes).
12. The technique of microfaunal study of Older Paleozoics—PAUL H. DUNN, University of Chicago (10 minutes, lantern).
13. The origin of fusain—C. H. CRICKMAY, University of Illinois.

MEDICINE AND PUBLIC HEALTH

Room 117, Pathology Building

HARRY F. FERGUSON, State Department of Public Health, Springfield, *Chairman*

A program is being prepared for this section, but the items are not yet ready for announcement.

PHYSICS AND CHEMISTRY

Room 133, Eckhart Hall

ELMER H. WILLIAMS, University of Illinois, *Chairman*

Election of chairman for 1932-33 and discussion of possible organization of separate sections in Physics and Chemistry.

(Papers 1-4 will be presented in joint session of the Physics and Chemistry groups. After the reading of paper 4 the groups will separate and papers 5-9 will be presented before the Chemistry group in Room 32, Ryerson Hall, and papers 10-13 before the Physics group in Room 133, Eckhart Hall. At the close of the regular program, at about 4 o'clock, the section will visit the Belfield Experimental Museum located in Belfield Hall. This is a museum of experiments in Physics that has been developed in association with the Rosenwald Museum of Science and Industry.)

Joint Session, Room 133, Eckhart Hall

1. Reactions between solids—ROLAND WARD, University of Illinois.
2. Pure air for our cities—DONALD B. KEYES, University of Illinois.
3. Photography of atom building—H. D. HARKINS, University of Illinois.
4. The chemical sterilization of public water supplies—HOWARD W. ADAMS, Illinois State Normal University, Normal.

Chemistry Division, Room 32 Ryerson Hall

5. Hydrous beryllium oxide colloids—W. H. MADSON, University of Illinois.
6. The Pinacol-pinacolone molecular rearrangement and atomic instability—JULIUS STIEGLITZ, RUSSEL B. COOPER, and GEORGE W. AYERS, University of Chicago.
7. Recent progress in the chemistry of the rare earth group—GORDON HUGHES and D. W. PEARCE, University of Illinois.
8. The chemistry of gallium—WARREN C. JOHNSON, University of Chicago.
9. Distribution of iodine between immiscible solvents—G. H. REED, University of Illinois.

Physics Division, Room 133 Eckhart Hall

10. An investigation of the Wehnelt cathode explosion—OTIS B. YOUNG, Southern Illinois State Normal University, Carbondale.
11. Determination of e/m for electrons—A. E. SHAW, University of Chicago.
12. The flash of the afterglow in argon—C. T. KNIPP, University of Illinois.
13. Double crystal X-ray spectrometry—L. G. PARRATT, University of Chicago.

PSYCHOLOGY AND EDUCATION

Room 126, Graduate Education Building

M. M. MAYNARD, Monmouth College, Monmouth, Illinois, *Chairman*

Election of chairman for 1932-33.

1. Who should go to college?—JESSE E. THOMAS, Illinois Wesleyan University, Bloomington.
2. Influence of social and emotional attitudes on the mental curve of adolescents—RALPH W. PRINGLE, Illinois State Normal University, Normal.
3. Tendencies in college chemistry courses—BRUCE W. MERWIN, Southern Illinois State Normal University, Carbondale.
4. The factors contributing to teaching success—WALTER S. MONROE, University of Illinois.
5. Laboratory method in educational psychology—GEORGE T. BUSWELL, University of Chicago.
6. Supervised teaching at North Central College—G. E. ERFFMEYER, North Central College, Naperville.

ZOOLOGY

Room 14, Zoology Building

F. C. HOTTES, James Millikin University, Decatur, *Chairman*

Election of chairman for 1932-33.

1. The habits of Ichneumon flies—W. V. BALDUF, University of Illinois.
2. Variation and distribution, recent and fossil, of the land-snail *Polygyra profunda* Say, in Illinois—FRANK C. BAKER, University of Illinois.
3. An ecological survey of the mammals of the Chicago area—E. V. KOMAREK, and D. A. SPENCER, The Chicago Academy of Sciences and the University of Chicago.
4. An ecological study of the birds and mammals of the Louisiana coastal plain—E. V. KOMAREK, Chicago Academy of Sciences and the University of Chicago.
5. The aquatic Isopods or Asellidae of Illinois—H. H. ROSS, Illinois State Natural History Survey, Urbana.
6. Address—F. C. KOCH, University of Chicago.

ILLINOIS STATE ACADEMY OF SCIENCE

JUNIOR SECTION

HIGH SCHOOL SCIENCE AND CLUBS

MABEL A. SPENCER, Granite City Community High School, *Chairman*
O. D. FRANK, University of Chicago School of Education, *Local Chairman*

FRIDAY, MAY 6

8:00 a.m. Registration. *Sunny Gymnasium, University High School.*

8:00–11:00 a.m. Arranging of exhibits. *Sunny Gymnasium.* Scientific equipment exhibited by scientific companies.

11:45 a.m. Luncheon (cafeteria service), *Blaine Hall.*

1:30–2:00 p.m. Annual Business Meeting of Official Delegates of Junior Section. *Auditorium, Graduate Building, School of Education.*

2:00 p.m. Formal Initiation of New Clubs—Rockford Chemistry Club.
Music—Maine Chemistry Club, Des Plaines.
Address—*Nature Nooks Through Looks and Books*—O. D. FRANK, University of Chicago.
Address—*A Survey of Junior Academy Work*—OTIS W. CALDWELL, Columbia University.

3:45 p.m. Presentation of Awards—FAY-COOPER COLE, President Illinois State Academy of Science.

4:00–5:30 p.m. Visit to Exhibits from Museum of Science and Industry, *Belfield Hall, School of Education.*

6:30 p.m. Annual Banquet. New Dormitories, University of Chicago. Program in charge of EDWARD CANNON, President Biology Club, University of Chicago High School.

8:15 p.m. Trip to Adler Planetarium.

SATURDAY, MAY 7

9:00–12:00 a.m. Inspection trips, including visits to Field Museum and Shedd Aquarium.

12:00 Luncheon at Museum.

PROPOSED AMENDMENTS TO THE CONSTITUTION

To be voted on at the Annual Business Meeting
The changes are indicated by italics

I. Change in the last paragraph of Article III, to facilitate and expedite the reception of new members, to read as follows:

"For election to any class of membership, the candidate's name must be proposed by two members, be approved by a majority of the committee on membership, *and be acted upon favorably by a majority vote of the council.*"

II. A change in the first sentence of Article V, relative to the membership in the Council, to read as follows:

"The Council shall consist of the President, First Vice-President, Second Vice-President, Secretary, Treasurer, Librarian, the retiring president and his immediate predecessor, *and the Secretary of the preceding year.*"

III. A change in the second paragraph of Article VI, to explain the duties of the Committee on Publication, to read as follows:

"The Committee on Publication shall consist of the President, the Secretary, and a third member chosen annually by the Academy, *and shall pass upon the papers published by the Society, subject to review by the Council.*"

IV. A change in By-Law VIII, relating to the requirements of manuscripts accepted for publication in the Transactions, to read as follows:

"No paper shall be entitled to a place on the program unless the manuscript or an abstract of the same shall have been previously delivered to the Secretary. No paper shall be presented at any meeting, by any person other than the author, except on vote of the members present at such meeting. *Manuscripts of papers must be handed to the Secretary at the time of the Annual Meeting.* All papers are limited to twenty pages, additional pages are to be paid for by the author. Except by invitation of the council, no paper may be accepted for the program unless the author is a member of the Academy or an applicant for membership. *No paper shall be accepted for publication which has already been published elsewhere.*"

HEADQUARTERS OF THE ACADEMY

MANDEL HALL, UNIVERSITY OF CHICAGO
57th STREET AND UNIVERSITY AVENUE

Registration Desk in Lobby of Mandel Hall

Telegrams and other messages may be sent to individuals in care of A. C. Noé, University of Chicago, Chicago, Illinois, and called for at the Registration Desk.

Changes of room, schedule, program, and all other special announcements will be posted in the lobby at the Registration Desk.

Junior Section Headquarters—University High School, 58th Street and Kenwood Avenue.

University dormitories can accommodate 125 boys and 40 girls. For two nights lodging, supper on Thursday, breakfast, lunch, and banquet on Friday, and breakfast on Saturday, $6.00 a person. Hotel accommodations for other girls available at $1.50 each for two in a room.

Hotel arrangements—See leaflet of Shoreland Hotel and above paragraph regarding Junior Section.

Railroad rates—Arrangements for reduced railroad fares are not yet completed; before purchasing ticket, inquire of your local agent whether reduced rates are available for persons attending the Annual Meeting of the Illinois State Academy of Science.

Requests for further information may be addressed to the officers of the local Committee on Arrangement:

A. C. Noé, University of Chicago, *Chairman*
Orlin D. Frank, University of Chicago High School

INSTRUCTIONS TO AUTHORS

Authors intending to submit their papers for publication in the *Transactions* of the Academy must bring their manuscripts to the Section Meetings *in final form*, and immediately after presentation on the program, hand them to the sectional chairman, who is responsible for their collection and delivery to the Secretary. Drawings and figures should be carefully executed, as the Academy cannot meet the expense involved in redrafting. All illustrations should be numbered to correspond with text reference. Authors are requested to follow carefully the instructions in the mimeographed pamphlet, "Instructions to Authors" prepared by the Editor and distributed by the Committee on Publications through sectional chairmen.

H. R. Wanless, *Secretary*
University of Illinois, Urbana

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